DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: ROCK POND	Lake Area (ha):	2.83
Town: MILLSFIELD	Maximum depth (m):	5.1
County: Coos	Mean depth (m):	1.6
River Basin: Androscoggin	Volume (m³):	46500
Latitude: 44°43'56"N	Relative depth:	2.6
Longitude: 71°14'20" W	Shore configuration:	1.34
Elevation (ft): 1880	Areal water load (m/yr):	32.86
Shore length (m): 800	Flushing rate (yr ⁻¹):	20.00
Watershed area (ha): 166.4	P retention coeff.:	0.42
<pre>% watershed ponded: 0.0</pre>	Lake type:	atural

BIOLOGICAL:	9 February 1994	3 August 1993
DOM. PHYTOPLANKTON (% TOTAL) #3	SPARSE - MOSTLY	GLOEOCYSTIS 35%
#2	ASTERIONELLA	MICROCYSTIS 25%
#3		ASTERIONELLA 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)		265
CHLOROPHYLL-A (µg/L)		1.64
DOM. ZOOPLANKTON (% TOTAL) #1	KELLICOTTIA 56%	NAUPLIUS LARVA 66%
#2	CYCLOPOID COPEPOD 21%	KELLICOTTIA 30%
#3	KERATELLA 16%	
ROTIFERS/LITER	52	78
MICROCRUSTACEA/LITER	17	183
ZOOPLANKTON ABUNDANCE (#/L)	70	262
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)	,	2.9
BOTTOM DISSOLVED OXYGEN (mg/L)		0.3
BACTERIA (E. coli, #/100 ml) #1		1
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.4 Hypolimnion volume (m^3) : 1500 Anoxic volume (m^3) : 1500

CHEMICAL:			ROCK PONI		
	9 February 1994		3 August 1993		
DEPTH (m)	1.0		1.5		4.0
pH (units)	6.4		6.6		6.3
A.N.C. (Alkalinity)	3.7		5.7		7.3
NITRATE NITROGEN	0.26		< 0.02	·	< 0.02
TOTAL KJELDAHL NITROGEN	0.20		0.59		0.48
TOTAL PHOSPHORUS	0.005		0.016		0.020
CONDUCTIVITY (µmhos/cm)	28.1		27.2		29.1
APPARENT COLOR (cpu)	28		70		55
MAGNESIUM			0.60		
CALCIUM			2.9		
SODIUM			1.1		
POTASSIUM			0.43		
CHLORIDE	< 2		< 3		< 3
SULFATE	6		3		4
TN : TP	92		37		24
CALCITE SATURATION INDEX			3.5		

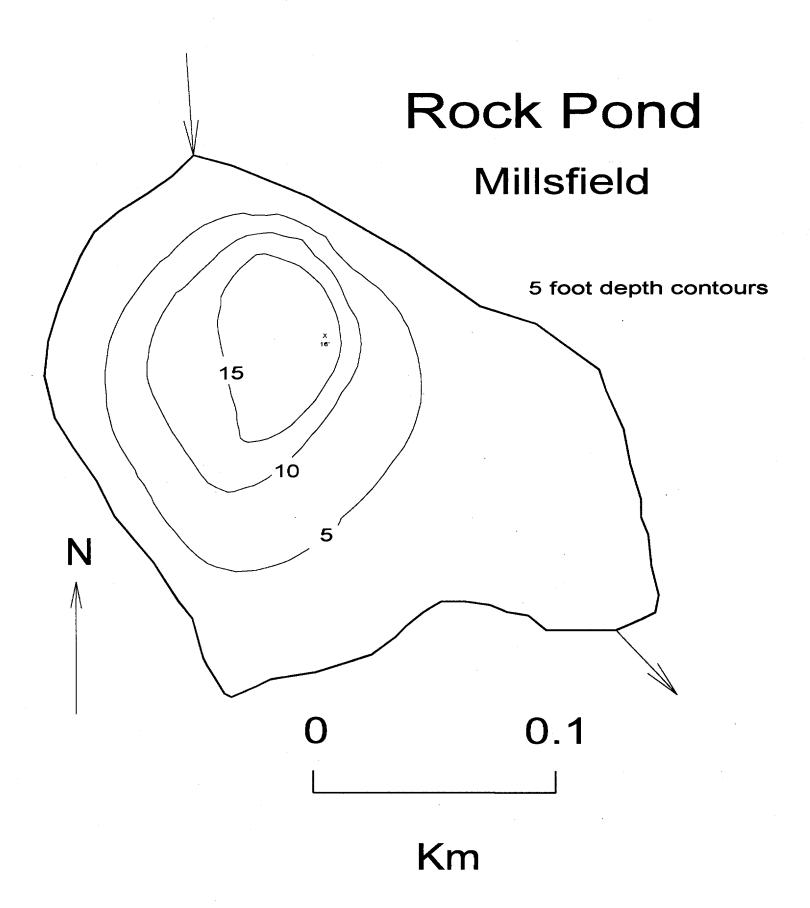
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

_	D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
	4	3	3	0	10	Meso.

COMMENTS:

- 1. This is a remote pond sampled cooperatively with the NH Fish and Game Department.
- 2. Numerous signs of the presence of moose in the area were observed.
- 3. An abundant zooplankton community was present, but with little variety.
- 4. <u>Cryptomonas</u> (25%) was the dominant genus of wholewater phytoplankton. Five other genera had similar abundances, each representing 10 to 15% of the phytoplankton community (<u>Mallomonas</u>, <u>Chroomonas</u>, <u>Schroederia</u>, <u>Merismopedia</u>, and tiny green flagellates).



FIELD DATA SHEET

LAKE: ROCK POND TOWN: MILLSFIELD

DATE: 08/03/93 WEATHER: PARTLY CLOUDY; CALM & WARM

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	25.5	7.9	94 %
1.0	21.0	7.1	79 %
2.0	18.0	6.7	70 %
3.0	15.5	4.9	48 %
4.0	11.0	0.4	4 %
5.0	10.0	0.3	. 3 %
		7	

SECCHI DISK (m): 2.9

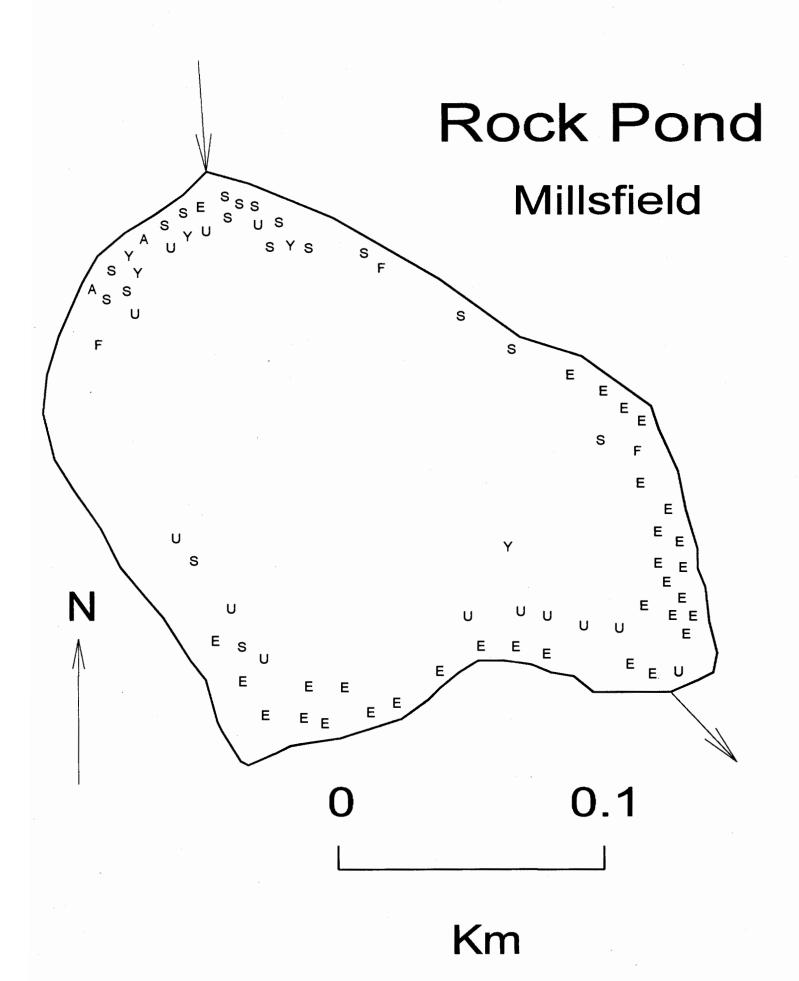
5.1 BOTTOM DEPTH (m):

> TIME: 1630

COMMENTS:Temperature profile indicated no well-mixed epilimnion was present; surface warming had occurred during the day without

subsequent mixing.

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

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LAK	E: ROCK POND	TOWN: MILLSFIELD	DATE: 08/03/93	
Key	PLANT	ABUNDANCE		
кеу	GENERIC	COMMON	ABUNDANCE	
E	Eriocaulon septangulare	Pipewort	Scat/Common	
S	Sparganium	Bur reed	Scattered	
ט	Utricularia	Bladderwort	Common/Abun	
Y	Nuphar	Yellow water lily	Sparse	
F	Nymphoides cordatum	Floating heart	Sparse	
A	Sagittaria	Arrowhead	Sparse	
	,			

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

- 1. Sweet gale was common around the entire pond, but was not in the water and is not depicted on the map.
- 2. Numerous clumps of filamentous algae were present near the inlet, but are not depicted on the map.
- 3. Freshwater sponges were observed on fallen submerged trees, but are not depicted on the map.